

REMARKS

Claims 21-40, 42-45, and 50-53 have been canceled without prejudice or disclaimer as being drawn to a non-elected invention. Claims 1, 4-7, 11, 15, 21, 28, 34-37, 40, 41, 54, and 56 have been amended. The applicant reserves the right to pursue the canceled claims, or other claims supported by the patent specification and drawings in one or more continuing applications. The application now includes claims 1-20, 41, 46-49, and 54-57.

Claims 4-6 and 41 were rejected as being indefinite. This amendment addresses the rejection by amending the claims to remove words such as "about". Similar amendments were made to several other claims to eliminate the word "about". All claims should satisfy the requirements of 35 U.S.C. 112, second paragraph.

Claims 1, 2, 5-7, 9, 15-17, 54 and 55 were rejected as being anticipated by Sanogoa "Effects of herbicides on *Fusarium solan f.sp. glycines* and Development of Sudden Death Syndrome in Glyphosate-Tolerant Soybean", *Phytopathology*, vol. 90, no. 1 pp. 57-64, 2000. Claims 3, 4, 8, 10-12, and 57 were rejected as being obvious over Sanogo.

Claims 1, 2, 9, 11, 17, and 54-56 were rejected as being anticipated by Harikrishnan "Effects on Root Rot and Damping-Off caused by *Rhizoctonia solani* in Glyphosate-Tolerant Soybean" *Plant Disease* vol. 86, No. 12, pgs 1369-1373, 2002.

Claims 1, 2, 5-7, 14-20, 41, 54, and 55 were rejected as being anticipated by Zhou, "Field Efficacy Assessment of Transgenic Roundup Ready Wheat" *Crop Science* vol. 43, No. 3, pgs 1072-1075 (May/June 2003).

It is noted that no formal rejections have been lodged against claims 13, 46-49 and 57, despite the summary paper indicating the same. These and other claims are patentable over the references of record as discussed in more detail below.

Each of these rejections is traversed. The claims as amended are focused on reducing disease (e.g., soy rust, stem rust, stripe rust) caused by foliar pathogens (e.g., Phakapsora or Puccinia) in herbicide resistant crops (e.g., glyphosate resistant wheat or glyphosate resistant soybeans) by treating the crops

with a herbicide (e.g., glyphosate, etc.). The independent claims in the case include claims 1, 41, 46, and 54. By this amendment, the independent claims specify one or more of (1) herbicide resistant crops (e.g., wheat or soybean crops engineered to be herbicide resistant crops), (2) treatment with an herbicide (e.g., glyphosate, etc.), and (3) addressing rust by foliar pathogens including *Phakopsora* or *Puccinia*.

None of the references of record address the claimed subject matter as amended (or as originally presented in claim 46).

Sanogo is directed to the treatment of sudden death syndrome caused by *Fusarium solani*. Sanogo states that the application of glyphosate increased disease severity of sudden death syndrome—in contrast, Sanogo reports that application of the herbicide lactofen reduced the severity of sudden death syndrome (see Abstract).

More specifically, in Sanogo- in vitro- conidia germination, mycelial growth, of *Fusarium* was reduced by glyphosate. But in planta, there was no difference. They concluded: “glyphosate tolerant and nontolerant cultivars respond similarly to infection by *Fusarium solani* f. sp. *glycines* after herbicide application.”

Based on statements made in the office action, there may be a misunderstanding with respect to “disease resistant” and “susceptible” cultivars vs. glyphosate tolerant and sensitive. Sanogo used line Asgrow A3071 which has both glyphosate tolerance AND disease resistance to sudden dying disease (pg. 60, col. 1, lines 3 and 26). Of course there will be less disease on disease resistant material. But one cannot separate out the two effects and say that the reduced disease was due to glyphosate tolerance, as is implied by page 4 of the office action where it is stated “In all herbicide treatments, severity of sudden death syndrome was lower in disease resistant than susceptible cultivars”. Contrary to this statement, Sanogo said there was no difference between the glyphosate tolerant and intolerant cultivars, as stated on pg. 57, last sentence of the abstract.

In contrast to independent claim1, Sonaga does not show glyphosate to be effective, and Sonaga does not show addressing fungal pathogens selected from *Phakopsora* and *Puccinia*. In contrast to independent claim 54, Sonaga does not address inhibiting growth or proliferation of fungal pathogens implicated in soy

rust or stripe rust. Thus, the salient features of independent claims 1 and 54 (as well as their dependent claims) are not anticipated by or obvious over Sonaga.

Harikrishnan is directed to how glyphosate tolerant soybeans respond to different herbicides when exposed to *Rhizoctonia solani* in terms of root rot and damping off (not rust). Harikrishnan show that the herbicide pendimethalin has different performance results than other herbicides (e.g., glyphosate, imazethepyr, lactofen, and pendimethalin in combination with imazethepyr)

Harikrishnan showed no differences with glyphosate or other herbicides for the most part. There was a slight decrease with glyphosate. In Fig. 4, it was significant, but not very big. In fact, there was no note of it in the results or discussion section of the paper. The main take away from Harikrishnan was that there was no difference between the round- up ready and sensitive cultivars.

In contrast to independent claim1, Harikrishnan does not show addressing fungal pathogens selected from Phakopsora and Puccinia. In contrast to independent claim 54, Harikrishnan does not address to inhibit growth or proliferation of fungal pathogens implicated in soy rust or stripe rust. Thus, the salient features of independent claims 1 and 54 (as well as their dependent claims) are not anticipate or obvious over Harikrishnan.

Zhou is focused on the performance of Roundup ready wheat. As explained in the Abstract, there was no reduction in the yield in the transgenic wheat when the transgenic wheat was treated with Roundup (which contains glyphosate).

In short, Zhou is not related to disease at all. Rather, it merely compares glyphosate tolerant and sensitive cultivars.

In contrast to independent claim1, Zhou does not show glyphosate to be effective at disease reduction in the wheat (rather it shows that the new cultivar's yield is not suppressed by application of Roundup), and Zhou does not show addressing fungal pathogens selected from Phakopsora and Puccinia. In contrast to independent claim 54, Zhou does not address to inhibit growth or proliferation of fungal pathogens implicated in soy rust or stripe rust. Thus, the salient features of independent claims 1 and 54 (as well as their dependent claims) are not anticipate or obvious over Zhou.

As a bottom line, none of the references showed a reduction in disease by

treating a glyphosate tolerant line with glyphosate. The either did not deal with disease (Zhou) or shows no differences.

In view of the above, claims 1-20, 41, 46-49, and 54-57 should now be in condition for allowance. Reconsideration at an early date is requested.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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